REMARKS/ARGUMENTS

In the Office action mailed December 16, 2004, claims 1-18 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,590,867 to Ash et al. ("Ash"). Applicants thank the Examiner for attention to the application.

Claims 1-5, 10, and 14 are now amended. Claim 1 is amended to specify that the path-level data comprises Quality of Service information for paths within the network domain and also to be consistent in use of terminology and grammar. Dependent claims 2-4 are also amended for consistency of terminology and grammar. Independent claim 5 is amended to specify that the path-level data comprises Quality of Service state information and for grammar. Independent claim 10 is amended to specify that the path-level data comprises Quality of Service information. Independent claim 14 was amended to specify that the path-level data comprises path Quality of Service information and that the link-level data comprises link Quality of Service information.

Claim 1 was rejected under 35 U.S.C. §102(e) as being anticipated by Ash. Claim 1 specifies "the database including path-level data comprising Quality of Service (QoS) information for paths within the network domain and link-level data for links within the network domain." Claim 1 also specifies "satisfying by the network server the flow request using the link-level data if the network server determines the network server cannot satisfy the flow request using the path-level data."

The Office action appears to point to col. 1, lines 36-38 of Ash for the proposition that Ash discloses a database

including path-level data and link-level data. With respect to
claim 2, for example, the Office action also appears to indicate
that Ash at col. 2, lines 5-8 discloses path-level data
including unused span width allocated to the path in a path
state. At col. 1, lines 36-38, Ash states "routers within the
network exchange information with each other by a flooding
technique so that each maintains a database of the network
topology." At col. 2, lines 3-11 Ash states

> [T]hereafter, a check is made by the originating
> router or `possibly a centralized bandwidth broker,
> based on flooded network status information, of the
> selected path as to whether the links from that router
> forming the path have an available depth (i.e.,
> bandwidth capacity not reserved for other services)
> for the determined class of service. If the links
> possess the requisite bandwidth, the router routes the
> packet over the outgoing link. Otherwise, another
> path is selected and the step of determining if the
> links forming the path have the requisite depth is
> repeated.

Thus, it would appear from the cited portions of Ash, that
Ash discloses routers maintaining a database of network
topology, and determining if links forming a path have a
requisite depth.

In addition the Office action also points to Ash at col. 5,
lines 13-34, apparently for disclosing satisfying by the network
server the flow request using the link-level data if the network
server determines the network server cannot satisfy the flow
request using the path-level data. In Ash, col. 5, lines 13-23
states

> [T]he originating router selects a path having,
> for example, a minimum number of hops using the

shortest path routing algorithm. Using the depth parameters discussed above, the originating router then checks whether the links forming the selected path have an available depth (bandwidth capacity) for the determined class of service. If so, the router routes the packets of the call or connection request over the links in the selected path. Otherwise, another path is selected and the step of determining if the links in the path have available capacity and depth is repeated.

Thus, it appears that Ash discloses checking whether links forming a selected path have an available depth.

By way of background, the present application states:

[T]he network QoS states are represented at two levels in the network QoS state database by the bandwidth broker, a link-level 28 and a path-level 30. At the link-level, the bandwidth broker maintains information regarding the QoS state of each link in the network domain including the total reserved bandwidth and the available bandwidth of the link. At the path-level, the bandwidth broker maintains QoS state information regarding each path of the network domain, which is extracted and 'summarized' from the link QoS states of the links of the path. An example of a path QoS state is the available bandwidth along a path, which is the minimal available bandwidth among all its links. By maintaining a separate path-level QoS state, the bandwidth broker can conduct a fast admissibility test for flows routed along the path.

Application, p. 7, line 23 to page 8, line 2.

Of course, it is the claims that are at issue. Claim 1 specifies "the database including path-level data comprising Quality of Service (QoS) information for paths within the network domain and link-level data for links within the network domain." Moreover, claim 1 additionally specifies "satisfying by the network server the flow request using the link-level data

if the network server determines the network server cannot satisfy the flow request using the path-level data." As indicated above, such is not disclosed or suggested by Ash, and accordingly claim 1, and dependent claims 2-4 are allowable.

Independent claim 5 was rejected under 35 U.S.C. §102(e) as being anticipated by Ash. Claim 5 specifies "the path-level databases including path-level data comprising Quality of Service (QoS) state information." Claim 5 also specifies "satisfying by the distributed network server the flow request using the link-level data if the network server determines the distributed network server cannot satisfy the flow request using the path-level data." With respect to claim 5, the Office action again points to col. 1, lines 36-38 for the proposition that Ash discloses a plurality of path-level databases and the path-level database including path level data. The Office action also again points to col. 5, lines 13-34 of Ash for the proposition that Ash discloses satisfying by the distribution network server the flow request using the link-level data if the network server determines the distributed network server cannot satisfy the flow request using the path-level data.

In view of the discussion of Ash with respect to claim 1, it does not appear that Ash discloses or suggests "path-level databases including path-level data comprising Quality of Service (QoS) state information" or "satisfying by the distributing network server the flow request using the link-level data if the network server determines the distributed network server cannot satisfy the flow request using the path-

level data." Accordingly, claim 5 and dependent claims 6-9 are allowable.

Independent claim 10 was rejected under 35 U.S.C. §102(e) as being anticipated by Ash. Claim 10 specifies "a database including path-level data comprising Quality of Service (QoS) information and link-level data for a path within the network domain". Claim 10 also specifies "satisfying the flow request using the link-level data if the flow request cannot be satisfied using the path-level data."

The Office action points to col. 1, lines 36-38 in Ash as disclosing a database, and presumably for also disclosing path-level and link-level data for a path within the network domain. The Office action also points to col. 5, lines 13-34 of Ash for the proposition that Ash discloses satisfying a flow request using length level data if the flow request cannot be satisfied using path level data. These portions have been discussed above with respect to claim 1. In view of the discussion of these portions of Ash, it does not appear that Ash discloses or suggests "a database including path-level data comprising Quality of Service (QoS) information and link-level data for a path within the network domain" and "satisfying the flow request using the link-level data if the flow request cannot be satisfied using the path-level data." Accordingly, claim 10 and dependent claims 11-13 are allowable.

Claim 14 was rejected under 35 U.S.C. §102(e) in view of Ash. The Office action points to Ash at col. 1, lines 36-38 for the proposition Ash discloses path-level data, and points to Ash at col. 5, lines 13-34 for the proposition that Ash discloses

satisfying the flow request using link level data if the flow request cannot be satisfied using path level data.

Again, these portions of Ash have been discussed with respect to claim 1. It does not appear that Ash discloses "accessing a database including path-level data comprising path Quality of Service (QoS) information and link-level data comprising link Quality of Service (QoS) information." In addition, it does not appear that Ash discloses or suggests "satisfying the flow request using link-level data if the flow request cannot be satisfied using the path-level data." Accordingly, claim 14 and dependent claims 15-17 are allowable.

Claim 18 is rejected under 35 U.S.C. §102(e) in view of Ash. Claim 18 specifies "path-level data for a path within the network domain, including: unused bandwidth allocated to the path; a set of critical links along the path; and a path state." The Office action points to col. 2, lines 5-8 of Ash for the proposition that Ash discloses a database including unused bandwidth allocated to a path. Ash at col. 2, lines 3-11 states

> [T]hereafter, a check is made by the originating router or possibly a centralized bandwidth broker, based on flooded network status information, of the selected path as to whether the links from that router forming the path have an available depth (i.e., bandwidth capacity not reserved for other services) for the determined class of service. If the links possess the requisite bandwidth, the router routes the packet over the outgoing link. Otherwise, another path is selected and the step of determining if the links forming the path have the requisite depth is repeated.

It would appear that if Ash did indeed disclose or suggest a database including path-level data which includes unused
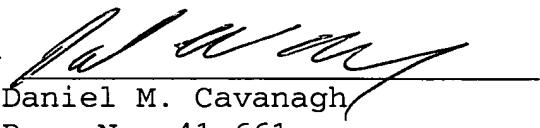
bandwidth allocated to the path, then there would be no need for "the step of determining if the links forming the path have the requisite depth is repeated" specified in Ash. Accordingly claim 18 is allowable.

Accordingly, the claims are in condition for allowance and allowance of same is respectfully requested.

Respectfully submitted,

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